

## REMARKS

Claims 1-25, 27 and 28 are pending in the application.

In paragraph 4 on page 6 of the Office Action, claims 1-4, 7-16, 25, 27 and 28 were rejected under 35 U.S.C. § 102(e) as being anticipated by Ellis.

In paragraph 6 on page 17 of the Office Action, claims 5, 6 and 17-21 were rejected under 35 U.S.C. § 103(b) as being unpatentable over Ellis in view of Moeller.

In paragraph 7 on page 20 of the Office Action, claims 22-24 were rejected under 35 U.S.C. § 103(b) as being unpatentable over Ellis in view of Moeller, and further in view of Youden.

Applicant respectfully traverses the rejection, but in the interest of expediting prosecution has amended the claims. .

Independent claim 1 sets forth receiving audiovisual data from a desired transmission channel, if said audiovisual data is not compressed according to a predetermined format, compressing said received audiovisual data according to said predetermined format, in response to receiving a record request prior to a broadcast time of the audiovisual data, storing dynamically, in a mass storage device and for a predefined period of time, compressed audiovisual data received from said desired transmission channel to be included in a title plan generated by a time shift scheduler, wherein said title plan includes information identifying a plurality of content stored dynamically as compressed audiovisual data, wherein at least one of said plurality of content has a variable duration, wherein storing compressed audiovisual data dynamically comprises allocating a portion of memory in the mass storage device for recording a portion of the at least one of said plurality of content having the variable duration for

subsequent access by users utilizing a predetermined amount of said allocated portion of memory to record a portion of the at least one of said plurality of content having a variable duration, allocating an additional portion of memory in the mass storage device to record a next portion of the at least one of said plurality of content having the variable duration in response to utilizing said predetermined amount of said allocated portion of memory, determining when reception of the at least one of said plurality of content having the variable duration has terminated, repeating said utilizing and said allocating said additional portion of memory until at least one of said plurality of content having the variable duration is determined to have terminated so that all of said at least one of said plurality of content having a variable duration is stored and deallocating any allocated portion of memory not used to record the at least one of said plurality of content having a variable duration after at least one of said plurality of content having the variable duration is determined to have terminated. In response to a user request, said stored compressed audiovisual data is provided to said user beginning with a portion of said stored compressed audiovisual data having associated with it a first temporal parameter. Independent claims 2, 12 and 28 set forth similar elements.

In contrast, Ellis merely discloses a program guide system that records, at a remote server, programs and associated program guide data on storage in response to record requests generated by the program guide. The programs are recorded based on start/stop times; duration, channels and program identifiers. Ellis also discloses pausing a live program.

However, Applicant respectfully submits that pausing a live program does not equate to recording a program in response to receiving a record request prior to a broadcast time of the audiovisual data. While it is true that while a DVR is paused, programming is recorded,

receiving a “record request” is not the same as receiving a “pause request.” Rather, pause only works if you are watching a program as it is being broadcast, i.e., watching live TV. Live TV may be paused for a predetermined period of time. If you don’t return to the paused show within the predetermined period of time, part of the show is deleted automatically. Pause also does not equate to recording a program because the user may change the desired transmission channel when paused and the program that was paused is lost, whereas a recorded program will stop recording, but the portion recorded is maintained. Accordingly, Ellis does not disclose, teach or suggest storing compressed audiovisual data dynamically in response to receiving a record request prior to a broadcast time of the audiovisual data.

Ellis et al. does not disclose allocating a portion of memory for recording a portion of the content having the variable duration, allocating an additional portion of memory to record a next portion of the content having the variable duration and determining when reception of the plurality of content having the variable duration has terminated and repeating said utilizing and said allocating said additional portion of memory until content having the variable duration is determined to have terminated so that all of said at least one of said plurality of content having a variable duration is stored. The Office Action states that Ellis et al. discloses that a user may record sporting events at the remote media server. Therefore, according to the Office Action, Ellis et al. teaches storing content of variable duration. However, Ellis only discloses that a program guide may be presented that shows sports programming among other types or genres of programming. Of course, the user may select to record such programming. However, often a program runs longer than the program guide indicates. In such a scenario, the program will

be cut off unless the user adds minutes to the recording window. Thus, content having a variable duration is not able to be recorded reliably.

The Office Action further states that Ellis discloses that a user may be able to cache programs in real-time. Ellis discloses that a user may indicate a desire to record a program on remote media server 24 by pressing a "PAUSE" key on remote control 40. The Office Action further states that the remote media server begins recording the program at this point and until the program is finished or until the user fast-forwards to the end of the cached copy. The Office Action states that the duration of the content changes over time as more of the content is cached, and the total recorded duration may depend on whether the user fast-forwards to the end or not.

However, the Office Action is confusing a recorded portion of content having a variable duration with content having a variable duration. Again, receiving a pause request is not the same as receiving a record request. The resulting setup of the DVR is completely different.

The Office Action still further maintains that Ellis discloses that, in playing back the stored content, the remote media server may prefetch the first 15 minutes of data. As the user advances towards minute 15, the next 15 to 30 minutes are prefetched and cached so that the remote media server continually prefetches the next 15 minutes of data. However, Applicant respectfully submits that the prefetching of 15 minutes is not allocating 15 minutes for recording. Recording is the opposite of fetching. Moreover, when fetching previously recorded material, Ellis knows the total duration of the program. The point of the present

invention is that the duration of the program to be recorded is unknown and such content has a variable duration that may extend beyond the time indicated in the program guide.

The Office Action still further maintains that Ellis further discloses recording a program until it has finished or until the user catches up by fast-forwarding. The Office Action requests this to "determining when reception of the plurality of content having the variable duration has terminated. However, Ellis states that the program guide issues a record request to remote media server 24 that may begin recording the program at that point and until the program is finished. Nevertheless, the program guide is unaware of a programming extending beyond the window in the program guide. Thus, the method disclosed by Ellis would cut off any portion of the event that extends beyond the window shown in the program guide.

Ellis further fails to suggest deallocating any allocated portion of memory not used to record a variable length program. The Office Action states that Ellis discloses deleting a program which is not accessed by a user for a predetermined period of time. However, Ellis deletes a program, not an allocated portion of memory not used to record a variable length program.

Thus, Ellis fails to disclose, teach or suggest the invention as defined in independent claims 1, 2, 12 and 28.

Moeller fails to overcome the deficiencies of Ellis. Moeller is merely cited as disclosing storing a temporally sub-sampled version of the desired broadcast content to generate a fast-forward track and generating real-time encoded play tracks, fast forward tracks, rewind tracks, and entry point data (EPD) files associated with each track, wherein said fast-forward and rewind tracks forming said temporally adjusted content.

However, Moeller also does not disclose, teach or suggest storing compressed audiovisual data dynamically as recited in the subsequent elements of the claims “in response to receiving a record request prior to a broadcast time of the audiovisual data.”

Moeller also does not disclose allocating a portion of memory for recording a portion of the content having the variable duration, utilizing a predetermined amount of the allocated portion of memory, allocating an additional portion of memory to record a next portion of the content having the variable duration and determining when reception of the at least one of said plurality of content having the variable duration has terminated. Rather, Moeller merely discloses generating a fast-forward track, rewind tracks, and entry point data (EPD) files associated with each track.

Still further, Moeller fails to suggest repeating said utilizing and said allocating said additional portion of memory until at least one of said plurality of content having the variable duration is determined to have terminated so that all of said at least one of said plurality of content having a variable duration is stored. Moeller also fails to suggest deallocating any allocated portion of memory not used to record a variable length program.

Thus, Ellis and Moeller, alone or in combination, fail to disclose, teach or suggest the invention as defined in independent claims 1, 2, 12 and 28.

Youden fails to overcome the deficiencies of Ellis and Moeller. Youden is merely cited as disclosing storing said fast-forward tracks in extents in front to back order and storing said rewind tracks in extents. However, Youden also does not disclose, teach or suggest storing compressed audiovisual data dynamically as recited in the subsequent elements of the claims “in response to receiving a record request prior to a broadcast time of the audiovisual data.”

Moreover, Youden does not disclose allocating a portion of memory for recording a portion of the content having the variable duration, utilizing a predetermined amount of the allocated portion of memory, allocating an additional portion of memory to record a next portion of the content having the variable duration and determining when reception of the at least one of said plurality of content having the variable duration has terminated. Rather, Youden merely discloses storing said fast-forward tracks in extents in front to back order and storing said rewind tracks in extents. Youden does not incrementally allocate memory for dynamically storing a program in response to receiving a record request prior to a broadcast time of the audiovisual data. Youden also does not determine whether a program has terminated.

Still further, Youden fails to suggest repeating said utilizing and said allocating said additional portion of memory until at least one of said plurality of content having the variable duration is determined to have terminated so that all of said at least one of said plurality of content having a variable duration is stored. Youden also fails to suggest deallocating any allocated portion of memory not used to record a variable length program. Instead, Youden only describes storing said fast-forward tracks in extents in front to back order and storing said rewind tracks in extents.

Thus, Ellis, Moeller and Youden, alone or in combination, fail to disclose, teach or suggest the invention as defined in independent claims 1, 2, 12 and 28.

Dependent claims 3-11, 13-25 and 27 are also patentable over the references, because they incorporate all of the limitations of the corresponding independent claims 2 and 12, respectively. Further dependent claims 3-11, 13-25 and 27 recite additional novel elements

and limitations. Applicants reserve the right to argue independently the patentability of these additional novel aspects. Therefore, Applicants respectfully submit that dependent claims 3-11, 13-25 and 27 are patentable over the cited references.

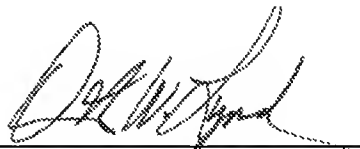
On the basis of the above amendments and remarks, it is respectfully submitted that the claims are in immediate condition for allowance. Accordingly, reconsideration of this application and its allowance are requested.

If a telephone conference would be helpful in resolving any issues concerning this communication, please contact Attorney for Applicant, David W. Lynch, at 865-380-5976. If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 13-2725 for any additional fee required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

Merchant & Gould  
P.O. Box 2903  
Minneapolis, MN 55402-0903  
(865) 380-5976



By:   
Name: David W. Lynch  
Reg. No.: 36,204